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NPIC/TSSG/DED-1530-69
10 March 1969

MEMORANDUM FOR : Chief, Plans & Programs Division, PPBS/NPIC

THROUGH : Chief, Technical Services & Support Group, NPIC

SUBJECT : R&D Status Report on Selected Projects

REFERENCE : PPD/PPBS Speed Letter Dated 24 December 1968

1. The following February Project Status information is forwarded in response to the request contained in the reference letter:

a. , High Precision Stereo Comparator - The project is just about on schedule. No major problems were encountered during the last month. 25X1 [redacted] the optical subcontractor, is maintaining the new schedule and has completed 55% of the optical work. [redacted] Project Manager will spend two days during the middle of March in Washington reviewing the final plans for the site preparation for this instrument. 25X1

b. Automatic Target Recognition Program - A five week, no cost, time e tension has been granted to the contractor primarily bec use of delays in the receipt of demonstration breadboard components. The cloud screening feasibility demonstr tion is now scheduled for 21 April. It is still planned to demonstrate feasibility using the electronic clue extraction technique and the diffraction pattern sampling approach.

Contract negotiations for Phase IV are tentatively scheduled for the week of 21-25 April. This phase will be a sixteen month effort and result in an engineering prototype automatic cloud screener for on-line testing.

c. 1540 Light Table - Acceptance testing by the Engineering Support Division was completed on 7 March. Operational ev luation by IEG is scheduled from 10 March to 7 April, I S from 7-21 April, DIAAP-9 from 21-28 April, and Army/SP D from 28 April to 5 May.

d. Dry Silver Materials & Equipment Report - Critical heat transfer problems are app rent with low gamma processing. E treme sensitivity of the material is indicated. Chemists and newly acquired thermodynamic and heat transfer personnel are working on the problem.

SECRET

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The new clean room pilot coating plant will be shut down for two weeks for the installation of additional controls and monitoring equipment. This is expected to considerably improve coating uniformities.

e. Wide-Field, High-Power Anamorphic Stereoviewer - The delivery of the first phase report (the optical design) and the wooden mock-up of the instrument will be two weeks early, now scheduled for 17 March 1969. The contractor, [redacted], has essentially completed the design and is presently completing the preliminary mechanical design, the mock-up and the first phase report. On the assumption that an acceptable optical design is produced, the prototype instrument is still scheduled for delivery on 30 July 1970. 25X1

The staff study, mentioned in the last report, concerning the problem of use of this instrument by operators who wear eyeglasses has been forwarded to the Executive Director.

f. Advanced Rhomboids Model II - [redacted] is completing the fabrication of this instrument and final inspection is now scheduled for 13-14 March 1969. Assuming satisfactory performance the instrument should be received by NPIC by 17 March at which time a previously scheduled evaluation program extending to mid-May 1969 will begin. 25X1

g. Automatic Stereo Scanner - Since the last R&D Status Report, the data for two monthly cost-to-complete reviews have been collected. The combined schedule and cost predictions result in a five week delay to 16 June 1969 and additional funds required of [redacted] 25X1

However, very serious optical design errors by [redacted] in the Rhomboid arm section have come to light in the last two weeks since the above estimates. Alternative solutions are being analyzed by [redacted] and will be presented to TSSG/DED and its optical consultant, [redacted] on 14 March 1969. 25X1 25X1 25X1 A substantial cost and probable schedule slippage will result with any one of the solutions; nevertheless, the Automatic Stereo Scanner will virtually be unuseable without these corrections. Approximately [redacted] remains of the funds authorized for contingency use in small increments. 25X1

h. Image Comparison Microstereoscope - Electrical design is complete and a breadboard has been constructed and tested successfully. Optical design has been completed, including an MTF analysis. An interface problem in the mechanical design of the stage linkage arose and has been

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solved at the e pense of seven (7) additional inches of instrument width.
On 18 February [redacted] informally reported a possible [redacted] overrun 25X1
in direct engineering labor costs; they are attempting to absorb this in
later phases of the development.

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[redacted]

Deputy Chief,
Development & Engineering Division, TSSG

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